REMARKS

Claims 1-28 were pending and presented for examination and in this application. In an Office action dated September 16, 2005, claims 3-5 and 10-12 were objected to, and claims 1, 2, 6-9 and 13-28 were rejected. Applicants thank Examiner for examination of the claims pending in this application and addresses Examiner's comments below.

Applicants have not cancelled any claims, but have added new claims 30-36 with this Amendment and Response. Applicants are amending claims 1, 9, 10, 17, and 23 in this Amendment and Response. These changes are believed not to introduce new matter, and their entry is respectfully requested. Applicants do not concede the scope of the protection to which Applicants consider the claimed invention to be entitled or that the subject matter of such claims was in fact disclosed or taught by the cited prior art. Rather, Applicants reserve the right to pursue such protection at a later point in time and merely seek to pursue protection for the subject matter presented in this submission.

In view of the Amendments herein and the Remarks that follow, Applicants respectfully request that Examiner reconsider all outstanding objections and rejections, and withdraw them.

Response to Rejection Under 35 USC 103(a) in View of Petschauer and Cohn

In the 1st paragraph of the Office Action, Examiner rejects claims 1-2, 6-8, 9 and 13-28 under 35 USC § 103(a) as allegedly being unpatentable in view of U.S. Patent No. 5,596,506 to Petschauer et al. ("Petschauer") and U.S. Patent Publication No. 2002/0133791 to Cohn et al. ("Cohn").

Applicants have amended claims 1, 9, 17, and 23 to explicitly recite what was previously implicit. The claimed invention "determine[es] a change in ground capacitance for a victim net to identify a noise amplitude that is less than or equal to a maximum allowable noise height" and "calculate[es] an input capacitance to add to the victim net in response to the determined change in the ground capacitance" to then "select[] from a library at least one cell having a capacitance for the victim net closest to the calculated input capacitance" to "coupl[e] the at least one cell with the victim net." By calculating what an input capacitance relative to a change in ground capacitance, input capacitance can be added without disturbing the overall circuit layout and without introducing new aggressors and violators into the design. This increases efficiency and speed of the design process.

These claimed features are not disclosed, suggested or taught by Petschauer or Cohn, either alone or in combination. Petschauer discloses a method for fabricating a chip that includes:

> 1) providing a trial layout in the chip for a victim net and a set of aggressor nets which have segments that lie next to the victim net; 2) assigning to the trial layout of the victim net, the parameters of--a line capacitance, a line resistance, and a driver output resistance; and assigning to the trial layout of each aggressor net, the parameters of--a coupling capacitance to the victim net, and a voltage transition; 3) estimating, for each aggressor net, a respective peak crosstalk voltage V_p which the aggressor net couples into the victim net as a function $V_p = K(e^{-X} - e^{-Y})$ where K, X, and Y are products of said parameters; 4) modifying said trial layout and repeating the assigning and estimating steps until a summation of the estimated peak crosstalk voltages in the victim net is within an acceptable level; and, 5) building the chip with the modified layout for which the summation is within the acceptable level.

(Petschauer, Abstract). The system in Petschauer includes adding a capacitor to a victim net to reduce noise. However, Petschauer provides no disclosure of calculating capacitance to add at an input, particularly as it relates to noise characteristics of amplitude and height when

determining a change in ground capacitance. Thus, the claimed invention is distinguishable over Petschauer.

Nor are the deficiencies of Petschauer addressed by Cohn. Cohn discloses:

> A method of integrated circuit design using the selective replacement of increasingly noise tolerant cells is disclosed. The method involves compiling a library comprising a plurality of design element cells, sorting the library into groups of functionally-equivalent cells, and ordering the cells in each group from one extreme to the other extreme value of a featured parameter for which the integrated circuit is to be tested. Each one of the cells in the library have a known value of another parameter so that the substitution of a library cell for an original cell or another library cell does not affect the overall integrated circuit value for that known parameter. A substitution can thus be made with the knowledge that additional problems involving the known parameter are not being created. If a test of the integrated circuit discovers a problem in a particular cell's performance with regard to the featured parameter the appropriate library group is accessed and the failing cell is replaced with the first unused cell in the group.

(Cohn, Abstract (emphasis added)). That is, the system in Cohn replaces noise sensitive cells in an attempt to improve circuit design.

A combination of Petschauer with the approach in Cohn would not yield the claimed invention. First, Petschauer discloses adding a capacitor to a victim net to reduce noise. In contrast, Cohn discloses replacing noise sensitive cells. Thus, it appears the two technologies are divergent in their proposed solutions to for handling noise in designs. Nevertheless, even if the references could be combined, it appears at best the combination would yield a system in which the amount of capacitance to add to reduce noise (as in Petschauer) and then have offset by the noise sensitive cells replaced that equal the capacitance amount to add (as in Cohn). This is not what Applicants claim.

In contrast to the combination of Petschauer and Cohn, the claimed invention does not replace any cells in the design as the combination of Petschauer and Cohn would require.

Rather, the claimed invention determines a change in ground capacitance of the victim net, calculates an input capacitance to add in response to this change in ground capacitance, and then adds a new element from the library corresponding to the calculated capacitance value to attach to the victim net. Thus, an input pin capacitance of the new cell increases the victim ground capacitance. By not replacing cells in the design as the proposed combination of the cited references would require, the claimed invention does not introduce new aggressors and violators into the design.

Therefore, based on the above Amendment and the Remarks, Applicants respectfully submit that for at least these reasons claims 1, 9, 17, and 23, as well as their respective dependencies, are patentably distinguishable over the cited references, both alone and in combination. Therefore, Applicants respectfully request that Examiner reconsider the rejection, and withdraw it.

Conclusion

Applicants' have added new claims 30-36 for which Applicants request consideration and examination. These claims are substantially the claims objected to by Examiner, but have been rewritten in independent form and include appropriate dependencies. Applicants respectfully submit that these are supported by the specification and are commensurate within the scope of protection to which Applicants' believe they are entitled.

In sum, Applicants respectfully submit that claims 1-36, as presented herein, are patentably distinguishable over the cited references (including references cited, but not applied). Therefore, Applicants request reconsideration of the basis for the rejections to these claims and request allowance of them.

In addition, Applicants respectfully invite Examiner to contact Applicants' representative at the number provided below if Examiner believes it will help expedite furtherance of this application.

Respectfully Submitted,
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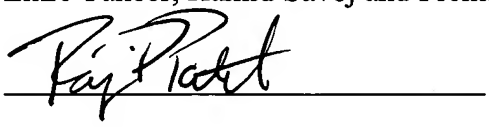
Date: December 16, 2005 By: 

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